IN THE CLAIMS:

The following listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently Amended) A security element for RF identification, wherein the security element has a flexible, electrically non-conducting substrate layer and a first electrically conductive layer of an electrically conducting material which is applied to the substrate layer and which in a first surface region is shaped out in pattern form to form an RF component, wherein a first relief structure with grooves for altering electrical properties of the RF component is shaped at least in region-wise manner in the surface region, associated with the RF component, in the first electrically conductive layer,

wherein

the first electrically conductive layer is shaped out in the first surface region in the form of an RF antenna or a coil, that in the region of the conductive layer which is associated with the RF antenna or the coil the grooves of the relief structure are oriented on average more longitudinally relative to the direction of flow of the electric current than transversely with respect to the direction of flow of the electric current, and that the relief structure has a profile depth in the range of 50 nm to 10 [[m]] μm and a spatial frequency in the range of 100 to 2000 lines per mm, wherein the grooves of the relief structure are provided both in the surface of the first electrically conducting layer, which is towards the substrate layer, and also in the surface of the first electrically conducting layer, which is remote from the substrate layer.

2. (Previously Presented) A security element according to claim 1, wherein the substrate is a replication layer and the first relief structure is shaped in the surface of the replication layer which is towards the first electrically conductive layer.

3. (Previously Presented) A security element according to claim 1, wherein the first electrically conductive layer is a metal layer applied to the substrate layer.

4. (Currently Amended) A security element according to claim 1, wherein the first electrically conductive layer is of a thickness in the range of 50 nm to 50 m, preferably 1 to 10 [[m]] μm.

5. (Previously Presented) A security element according to claim 1, wherein the grooves of the relief structure in the region of the electrically conductive layer which is associated with the RF antenna or coil are oriented longitudinally with respect to the direction of flow of the electric current.

6. (Currently Amended) A security element according to claim 1, wherein the first electrically conductive layer in the first surface region is shaped out in the form of one or more conductor tracks of a width of 50 [[m]] μm to 10 mm, preferably 100 [[m]] μm.

7. (Previously Presented) A security element according to claim 1, wherein the security element has a second electrically conductive layer and that the first and the second electrically conductive layers form a capacitive element in the first surface region.

8. (Previously Presented) A security element according to claim 7, wherein a second relief structure is shaped at least in region-wise manner in the surface region associated with the capacitive element in the second conductive layer.

9. (Previously Presented) A security element according to claim 7 , wherein in that the first relief structure has a plurality of mutually crossing grooves.

10. (Previously Presented) A security element according to claim 1, wherein the first relief structure is of a sawtooth, triangular, rectangular or sine profile.

11. (Previously Presented) An optical security element according to claim 1, wherein the first relief structure is formed from the superimposition of a coarse structure and a fine structure.

12. (Previously Presented) A security element according to claim 1, wherein the first relief structure additionally produces an optical security feature.

13. (Previously Presented) A security element according to claim 1, wherein the security element has a resonance circuit for RF identification.

14. (Previously Presented) A security element according to claim 1, wherein the security element has a chip.

15. (Previously Presented) A security element according to claim 1, wherein the security element is a film element, in particular a stamping film, a laminating film, a sticker film or a partial element of a transfer layer portion of such a film.

16. (Currently Amended) A process for the production of a security element for RF identification, wherein in the process a first conductive layer of an electrically conducting material shaped out in pattern form to form an RF component is applied to a flexible, electrically non-conducting substrate layer in a first surface region of the substrate layer, wherein a first relief structure with grooves for altering electrical properties of the RF component is shaped at least in region-wise manner in the surface region associated with the RF component in the first conductive layer, wherein in the first surface region the first electrically conductive layer is shaped out in the form of an RF antenna or a coil, wherein in the region of the conductive layer which is associated with the RF antenna or the coil the grooves of the relief structure are oriented on average more longitudinally relative to the direction of flow of the electric current than transversely with respect to the direction of flow of the electric current, and wherein the relief structure has a profile depth in the range of 50

nm to 10 [[m]] μm and a spatial frequency in the range of 100 to 2000 lines per mm, wherein the grooves of the relief structure are provided both in the surface of the first electrically conducting layer, which is towards the substrate layer, and also in the surface of the first electrically conducting layer, which is remote from the substrate layer.

17. (Previously Presented) A process according to claim 16, wherein the first conductive layer is applied to the substrate layer over the full surface area, for example by vapour deposition, and then partially demetallised in pattern form to form the RF component.

18. (Previously Amended) A process according to claim 16, wherein two or more capacitive partial elements connected with connecting tracks are shaped out in the first conductive layer and that connecting tracks to capacitive partial elements are later severed for fine tuning of the resonance frequency.